EXPERIMENTS
PREPARATION

Table: T = Roomtemperature

Canal 1	Φ_x	259,0 Ω
	V	364 Ω
	I	O.L.
	Φ	O.L

Temperature T_2 =
6,9 ~~8,7~~ Ω
8,7 -2
O.L.
O.L.

Canal 2	Φ_x	8,1 Ω
	V	56,9 Ω
	I	~~7,1 Ω~~ ~~8,1~~ 7,4 Ω
	Φ	

5.2.1 WHEN INCREASING I_B SUFFICENTLY WE OBSERVE A LINEAR IN/- DECREASE OF THE VOLTAGE WHICH WE CAN FIT LATER FOR THE RESISTANCE.

Φ_D = 26,04 $\frac{\mu V}{\mu A}$ DEI
&
Φ_D = 15,75

Φ_B = 54,68

Φ_B = 98,47

WE TUNE THE BIASING CURRENT TO OBSERVE A MAXIMUM SWING VOLTAGE VIA A PEAK TO PEAK MEASUREMENT AND CHOOSE A VALUE OF ~~12,354 μA~~ = I_B = 12,354

GENERALLY VALUES BETWEEN 12,3 & 12,6 DO NOT ~~OU~~ YIELD VASTLY DIFFERENT RESULTS.

WE ADJUST THE OFFSET VIA V_D TO GET EQUAL ~~DISTA~~ AMPLITUDE BETWEEN THE MIN- & MAXIMUM VALUE TO THE CENTER V = 0
WE ARRIVE AT A VOLTAGE OF V_D = 15,78 μV
SIMILAR RESULTS ARE ~~ACH~~ ACHIVED IN THE RANGE [15,78 & 16,19] ↙ ADJACENT IN SOFTWARE

NOW ADJUSTING FOR Φ_x USING THE SAME APPROACH WE ARRIVE AT I_D = 12,409 μA
V_D = 16,19 μV

WITH A DISABLED GENERATOR WE ADJUST FOR U_{out} TO BE 0 & SET Φ_D = 10.7

SQUID NOISE

WE OBSERVE A PLATEAU UP UNTIL 0.02 MHz
WITH A DECLINE AFTERWARDS FROM
-64 - -105 dBV.

WITH A FREQUENCY AT OR ABOVE 16 GHz
WE GET RESONANZ PEAKS.

TWO STAGE SQUID

1) WITH THE Φ_x SIGNAL WE TUNE THE SETUP LIKE
BELOW & ARRIVE AT A BIAS CURRENT OF
$I_b = 9.\#05\ \mu A$ AND AN OFFSET OF $V_b = 161{,}51\ \mu V$

2) We proceed by turning off the generator. Next, we use ~~Φ_x~~
Φ_b to set V_{out} to 0. We find $\Phi_b = 9{,}99\ \mu\Delta$

$I = 15.720$ $\Phi_x = 25.44$

SPECTRUM VIEW WITH R_f@FLL → 30.04 Ω

GAIN BANDWIDTH PRODUCT 4 GHz